

## “WHAT’S THE MEANING OF...”? VIRTUAL COMMUNITIES AS DIALOGICAL CULTURES IN LEARNING ITALIAN

Concetta PAPAPICCO, Rosa SCARDIGNO, Giuseppe MININNI

Department of Education, Psychology, Communication, University of Bari “Aldo Moro”, Bari, Italy

**Abstract:** *Communities are spontaneously created when members focusing on their business, negotiate meanings that affect their interests and their whole existence in an inter-subjective space. With the advent of Internet, there has been an extraordinary increase of virtual communities, referring in particular to Community Question Answering Services (Q&A) especially designed to help users to obtain information. The construction of these virtual contexts emphasize their “transactive” nature, “since the intentions are ‘negotiated’ according to the law of demand and offer of meaning” (Mininni, 2010, 25). Taking into account the complexity of intercultural relationships, based on linguistic and relational variety, this paper aims to describe how Community Question Answering can be a space both for the meeting of cultures and for collaborative ways of constructing knowledge. In particular, since language acts as the “meta-artifact” in the co-construction of reality, it represents the mediation tool that allows persons to communicate; on the other side, it can become the object of collaborative learning in Q&A sites, especially when the discursive object -that is Italian language- is understood from its origins as a “language-culture.” The main purpose of this paper is to identify the discursive pathways and the interactional weaves of discussions when the topic is “language”. Focusing on the domain “Italian Language” on Stack Exchange, both English and Italian online interactions dealing with learning Italian language have been analyzed through sentiment analysis (quantitative analysis) and discourse analysis (qualitative analysis), assuming that interactions with questions in Italian are different than those with questions in English.*

**Keywords:** *virtual communities; Q&A; cultures; Stack Exchange; Italian language*

### 1. INTRODUCTION

In an increasingly "liquid" society (Bauman, 2003), social relationships also become a mediated experience. In the past, people formed spontaneously groups, defined as community of practices (Wenger, 1998), born with the goal of pursuing a common aim. It is not about simple aggregations, but groups that deal with meanings that affect their interests and their entire existence in an inter-subjective space. Practice communities create spaces through three important dimensions that come to fruition in the joint venture, mutual engagement, and shared repertoire, which are both promoters and products of negotiation processes. With the digital revolution, these spaces become virtual and they see the emergence of online communities: virtual communities are

social aggregations that emerge from the Net when enough people carry on those public discussions long enough, with sufficient human feelings, to form webs of personal relationships in cyberspace. (Rheingold, 1994:5).

Thus, these virtual communities offer "liquid" man the opportunity to get in touch with other Internet users in a fast way and overcome the space-time barriers, typical of a face-to-face relationship: the "connection" becomes the new and a privileged form of interaction for the man of the third millennium. The construction of these virtual contexts emphasize their "transactive" nature, "since the intentions are 'negotiated' according to the law of demand and offer of meaning" (Mininni, 2010:25). Since the basis for sense-making in virtual communities is negotiation, language become a tool used for mediating between different positions. Given that there are no space-time barriers in online communities, language becomes furthermore a means of communication between members of different cultures. The importance of language in interaction between cultures, in fact, supports the human "acts of meaning" (Bruner 1990). It is in the exchange of meanings that language could help members of virtual communities in building or sharing knowledge. This is what happens at the

Questions and Answers (Q&A) sites. Recently, there is an increase in web users looking for information or asking for help on Q&A sites. As explained by Wasko and Faraj (2000), participation in these virtual communities is motivated by the perception of interest in topics and in behavior of reciprocity and pro-sociality. Recently, researches have focused on studying the linguistic factors at Q&A sites, i.e. how questions are formulated. Taking into account the complexity of intercultural relationships, based on linguistic and relational varieties, this paper aims to describe how Community Question Answering can be a space both for meeting cultures and for collaborative ways of constructing knowledge. Considering Stack Exchange as a Q&A site, ten interactions will be analyzed, of which five with questions in English and five with questions in Italian, extracted from the domain of Italian learning. A quantitative analysis will be carried out through sentiment analysis and a qualitative analysis by means of discourse analysis. The main purpose of this paper is to identify the discursive pathways and the interactional weaves when the topic of discussion is “language”, assuming that interactions with questions in Italian are different from those with questions in English.

## 2. METHOD

The Stack Exchange site comprises over a hundred of different Q&A websites organized by categories. Each site in Stack Exchange consists of pages containing one question posted by a user and an arbitrary number of answers submitted by other users. Questions can have one accepted answer, chosen by the original asker, if that solves the problem. We consider as ‘successful’ those questions for which an accepted answer has been provided. Questions, answers and users are subject to a reputation award process by badges (bronze, silver and gold badge).

Through their contributions, users earn extra rights, reputation points and badges, which reflect users’ skills as well as their status in the community (Calefato *et al.*, 2015:2).

In turn, this reputation system motivates users to generate high quality content. Stack Exchange sites are also self-moderated by community members that unlocked moderation rights by earning sufficient reputation points. To keep quality high, moderators can remove questions or answers because inappropriate or irrelevant. Each Stack Exchange interaction is made up of questions, comments on questions, answers and

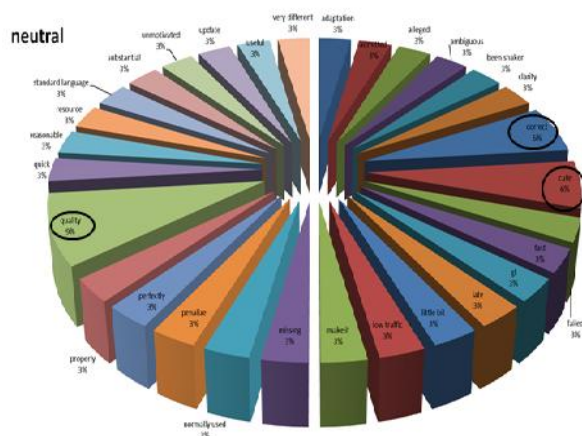
feedback responses. In this study, ten interaction with more than one answer to the domain of Italian language learning have been collected over the course of a month (from 3 March 2017 to 4 April 2017), with an overall number of eighty-nine texts: forty-seven texts in Italian language and forty-three texts in English language. As a domain for language learning, interactions involve both users who want to learn Italian as a second language (L2), and Italian users who ask for help to others to enhance themes or resolve doubts about the use of some expressions. For this reason, five interactions in English and five interactions in Italian were collected. A quantitative analysis was carried out on these textual data. Regarding quantitative analysis, a sentiment analysis (Pang & Lee, 2008) has been carried out. This is a methodology useful for extrapolating from texts a polarity (positive, negative or neutral) and the prevalent emotion in the extracts. Two softwares were used: Semantria for Excel of the Lexalytics Inc. Group and Tone Analyzer of the IBM Group. Quantitative analysis will be carried out through qualitative analysis by means of discursive analysis. Discourse, made up of interactions in English and Italian, is a sense-making process that generates a mutual exchange between “subject” and “object” (Howarth, 2000).

In this vein, discourse could be recognized as a reality modelling matrix since it has the power to give “order” to the social world (Foucault, 1971), to shape “agency” around human will (Arendt, 1978) and to legitimize a regulatory idea of the enunciative potential in the ethical domain (Habermas, 1985) (Mininni & Manuti, 2017, 245).

## 3. RESULTS

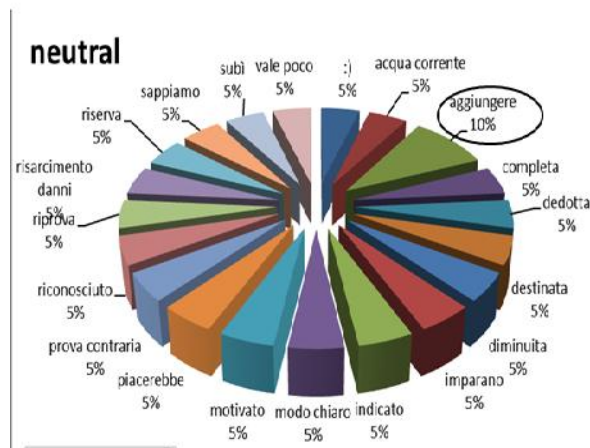
**3.1 Quantitative methodology.** From the analysis with Semantria, a neutral sentiment emerged both for interactions with questions in English and for interactions with questions in Italian. The Phrase function of Semantria has been used, that is extracting the sentiment (positive, negative or neutral) of the words contained in the texts. In fact, the following graphs show the prevailing sentiment and the words most used to whom the software has attributed neutral polarity. As is shown in Figure 1, the words most used to which the software attributes neutral sentiment, are “correct”, “cute” and “quality”. While, as shown in Figure 2, the neutral word most used is “aggiungere” (“to add”). Neutrality in Semantria is calculated based on terms with neutral sentiment or as mean of positive and negative terms in a range from 1 to -1. On the same textual data, an analysis was carried out with the IBM Tone Analyzer tool, which allowed to obtain the prevalent emotion

corresponding to interactions with questions in English and with questions in Italian.



[Fig. 1 sentiments and words used in interactions with questions in English]

Fig.1 Sentiments and words used in interactions with questions in English



[Fig. 2 Fig. 2 sentiments and words used most in interactions with questions in Italian]

Fig.2 Sentiments and words used most in interactions with questions in Italian

From the analysis it emerged that the prevalent emotion of interactions with English questions is *disgust* (as seen in fig.3); conversely, the prevalent emotion in interactions with questions in Italian is *joy*.

From these quantitative results, it is possible to understand how neutral sentiment confirms the rigidity of Stack Exchange rules, which as Q&A site has a protocol that all users have to adhere to and that interactions are strictly controlled by moderators. Users, fearing that their comments are deleted, tend to conform to the rules of the site. However, conversational tone analysis tends to confirm hypotheses about the difference in interaction mode in English and Italian extracts. The difference in emotions in the two types of interaction suggests that users have different intentions on the basis of the questions: in Italian interactions, users who are generally of Italian nationality, are seeking to confirm the use of certain expressions, as a consequence the intervention of moderators is minimized; otherwise, moderators in English interactions appear to be more present, as users need to learn the contents and meanings of the Italian language, so erroneous information may disorient other users who have the same needs as those who put the question or of those who commented on it. It is therefore almost an intolerance from the users who interact in English with the moderator's intervention,

eg. “Let me see. Answered the question? Yes. Low quality question? Yes. Down vote explained? No. First post encouragement? No. Typical Stack Overflow behaviour? Unfortunately, yes.”.

This could justify the prevalence of disgust in English interactions. Results confirm that within Stack Exchange there is a great collaboration between users, but also a meeting between different cultures. It is also necessary to keep in mind that the tools used for sentiment analysis have limitations: both softwares are based on an internal vocabulary of words through which a match is made with the texts analyzed. This comparison does not allow to consider rhetorical means often used by users to express themselves, nor does the context of enunciation. For this reason, it is essential the support of qualitative analysis.

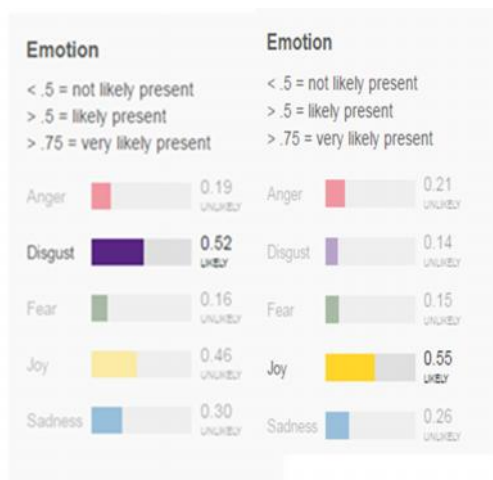


Fig. 3 Output Tone Analyzer interactions in English

Fig. 4 Output Tone Analyzer interactions in Italian

Fig.3 Emotion of interactions with questions in English and Italian

**3.2 Qualitative methodology.** "Asking" implies a dialogic approach because user poses a question by asking for the collaboration of others, which would lead to consider “answer” as a "common good" accessible to other internet users. This aspect is visible in some of questions posed in

English interactions, where a cognitive and operational path is proposed that shows the efforts already made to look for a response, probably not successful.

Eg. 1 Assuming *altar* is an apocope of *altare*, why *agl'altar* here? One thought I had was that maybe it was plural: a gli altari = agli altari = agl'altari = agl'altar. But I couldn't find a single translation that translates it as plural ("altars"). I'm also not sure if this is how Italian works (she also says *agli astir* without any contraction later). My question: Are *agl'altar* and *all'altar(e)* synonyms? If so, is there a reason to chose one over the other?.

This path is found in the comment to the question itself, in which this argument is merited

Eg. 2 It's not quite 100% perfect Italian, as you noticed yourself.

There are rather marked differences between the responses and the comments. First of all, those differences concern the possibility of expressing emotions. Generally, in the comments it can find the expression of emotions, while in the responses the statements appear more neutral and aseptic

Eg. 3 I didn't even think to *scientemente*: I'm surprised about what Treccani imposes.

It can notice a different "enunciative" and personal "presence" in the two types of posts. In particular, the answers appear on the "explanatory-didactic" side, giving rise to the rhetoric of "asymmetry". This discourse function appears to be implemented discourse by a series of linguistic and rhetorical-argumentative indications: a) the use of verbal forms, such as the future and the imperative

Eg. 4 "You'll find several applications" or "See this forum";

b) the attempt to "normalize" the exposed content

Eg. 5 The trigraph *sci* is normally used for denoting the / / phoneme;

c) the razionalization

Eg. 6 There's no hard and fast rule: after all, exceptions are cases that cannot be linked together in a rule or subrule;

d) the proposal of a rule is usually expressed through an impersonal statement or a singular third person, just to testify the objectivity of the thing.

But the personal involvement of respondents, while still maintaining the didactic aspect, can emerge from the use of the first singular person, accompanied by the modal verb 'to have to'

Eg. 7 In Italian there is this rule: sc + vowel is pronounced like the English "SH", IPA: , sc + consonant is pronounced like the English "SK", just like in the English "ski". So in the word "sciare" [ i a re] I have to put an "i" before the "a" in order to pronounce "SH", IPA: ;

e) indeed, responses are often modulated discursively mitigation, including by narrowing the scope of their personal knowledge

Eg. 8 However, this case is easy: I'm not aware [...] As far as I know;

f) the use of peripherals that make their arguing proposal less assertive

Eg. 9 It's not rare, but not frequent either.

The comments point to more explicitly-based situations, through direct references that support exchanges that are more closely related to "symmetry". Such a characteristic can result in escalation in inter-ethnic exchanges, accompanied by a strongly emotional connotation

Eg. 10 @andy256 Beyond "Monketto" being a horrible name [...].

Transactions in English appear to have been characterized by forms of "intolerance" with regard to topics, but also of the system itself

Eg. 11 Let me see. Answered the question? Yes. Low quality question? Yes. Down vote explained? No. First post encouragement? No. Typical Stack Overflow behaviour? Unfortunately, yes..

The type of text setting in the comments involves a more pronounced use of subjective verbs

Eg. 12 I think you are missing that there is a substantial difference between....

Sometimes, in the comments, a real answer is given that, disguised as a "comment", takes on a more informal, singular or plural first-person configuration and in the form of "habits" rather than rules/norms

Eg. 13 If you want a phonetic description I'd say *gion uen* or *scion uen* but usually when we want to write Chinese words in Italian we use either Pinyin or Wade-Giles.

In the Italian topic, there are some common trends in English topics. In particular, questions seem to be built mostly as the result of a path, made of attempts and reasonings, however, in uncertain form, as evidenced by some discursive traits of these extract

Eg. 1 Leggendo le notizie in italiano ho trovato spesso l'espressione [...] Penso che il significato di "sedicente" [...] appare un'altra accezione che sembra essere più neutra [...] ha secondo me una connotazione negativa.

Answers respond to the fundamental need, which is to get information, reduce uncertainty and organize knowledge, and for this purpose content tries to be structured also by virtue of a path of "cognitive simplification"

Eg. 2 “Qui trovi degli esempi specifici” e “Ho trovato... riassumendo...”, or “In parole semplici si tratta di...”.

A particular climate, however, which is constructed discursively, makes think of the rhetoric of "familiarity", characterized by a greater sense of affectivity experienced in comments and responses, with more references to the first person, with the call to close social affiliation

Eg. 3 “Nella mia famiglia, ma non solo...”,

to geographic location

Eg. 4 “A Napoli (dove vivo)...,

but also at a more general level, as a reference to Italianism. This sense of familiarity is also marked by a "cure" and concern for the other

Eg. 5 “Spero che questa informazione sia utile.”.

This "familiar" atmosphere is so widespread that even non-Italian originators speak as if they were such

Eg. 6 Di tutte le espressioni che leggo in questa pagina, secondo me Sacro / Profano è l'unica che può essere considerata al 100% italiano e che si usa in tutta Italia. Le altre (oro / latta, lana / seta, stracci / seta, faccia di tozza) secondo me sono altamente regionali, non ne ho mai sentita nessuna in tanti anni in Italia.

While accompanied by two expressions that limit the scope of what has been said ('Secondo me'), the user employs general expressions ('100%', 'tutto', 'mai sentito'). More generally, there is a

slight difference between comments and responses to what is happening in English texts, as well as a more pronounced availability to self-disclosure and emotional attachment even in the responses themselves.

From qualitative analysis it is possible to understand that the strength and weakness of this domain is precisely cultural diversity. The authors Raban and Harper (2008) have created a taxonomy of Q&A sites where diversity re-enters, i.e. creating questions and answers sites where members of demographic, cultural, geographically and economically diverse communities are present.

#### 4. CONCLUSION

The domain of learning Italian language on Stack Exchange is a question and answer environment that is very popular with users from different cultures. From the quali-quantitative analysis emerges that it is precisely the cultural element that determines differences in interaction and collaboration depending on whether the question is in English or in Italian. Interactions are, in fact, in the same way collaborative, based on logical processes that do not always lead to the success of interaction, but there is a difference in interaction mode, as there is intolerance into users who ask questions in English. This is confirmed by sentiment analysis software that detects a neutral polarity of the texts but also detects disgust as a prevalent emotion. In fact, cultural diversity makes Q&A sites spaces where people collaborate by cutting space-time barriers.

#### BIBLIOGRAPHY

1. Calefato, F., Lanubile, F., Raffaella, M., & Merolla, N. N. (2015). Success Factors for Effective Knowledge Sharing in Community-based Question-Answering. *Proc. of the International Forum on Knowledge Asset Dynamics (IFKAD 2015)*. 1431-1441.
2. Cantelmi, T. (2013). Tecnoliquidità. *Modelli per la mente* 5(1-3). 7-14.
3. Ellis, D., Oldridge, R., & Vasconcelos, A. (2004). Community and virtual community. *Annual review of information science and technology*, 38. 145-188.
4. Foucault, Michel. (1971). *L'ordre du discours*. Paris: Gallimard.
5. Gabillon, Z. (2005). L2 learner's beliefs: An overview. *Journal of Language and Learning*, 3(2). 233-260.
6. Habermas, J. (1985). *The theory of communicative action*. Boston, MA: Beacon Press.

7. Herrera, J. M., Parra, D., & Poblete, B. (2015). Retrieving Relevant Conversations for Q&A on Twitter. In *SPS@ SIGIR*. 21-25.
8. Howarth, D. (2000). *Discourse*. Buckingham: Open University Press.
9. Mininni, G. (2010). The method of dialogue: transaction through interaction. *Integrative Psychological & Behavioral Science*, 44(1). 23-29.
10. Mininni, G & Manuti, A. (2017). A rose is more than a rose... the diatextual constitution of subjects and objects. *Text&Talk*, 37(2). 243–263.
11. Raban, D. & Harper, F. (2008). Motivations for answering questions online. *New media and innovative technologies*, 73.
12. Traetta, M., Annese, S. (2011). Comunità virtuali e turismo: un legame da valorizzare. *Turismo e Psicologia*, 1(4). 555-565.